§75.1318

(d) Detonators shall be completely within and parallel to the length of the cartridge and shall be secured by half-hitching the leg wires around the cartridge or secured by an equally effective method.

§75.1318 Loading boreholes.

- (a) Explosives shall be loaded by a qualified person or a person working in the presence of and under the direction of a qualified person.
- (b) When boreholes are being loaded, no other work except that necessary to protect persons shall be done in the working place or other area where blasting is to be performed.
- (c) When loading boreholes drilled at an angle of 45 degrees or greater from the horizontal in solid rock or loading long holes drilled upward in anthracite mines—
- (1) The first cartridge in each borehole shall be the primer cartridge with the end of the cartridge containing the detonator facing the back of the borehole: and
- (2) The explosive cartridges shall be loaded in a manner that provides contact between each cartridge in the borehole.
 - (d) When loading other boreholes—
- (1) The primer cartridge shall be the first cartridge loaded in the borehole;
- (2) The end of the cartridge in which the detonator is inserted shall face the back of the borehole; and
- (3) The primer cartridge and other explosives shall be pushed to the back of the borehole in a continuous column with no cartridge being deliberately crushed or deformed.
- (e) An explosive shall not be loaded into a borehole if it is damaged, deteriorated or if the cartridge is incompletely filled.
- (f) Explosives of different brands, types or cartridge diameters shall not be loaded in the same borehole.
- (g) Only nonconductive, nonsparking tamping poles shall be used for loading and tamping boreholes. The use of nonsparking connecting devices for extendable tamping poles is permitted.

[53 FR 46786, Nov. 18, 1988; 54 FR 888, Jan. 10, 1989]

§ 75.1319 Weight of explosives permitted in boreholes in bituminous and lignite mines.

- (a) The total weight of explosives loaded in any borehole in bituminous and lignite mines shall not exceed 3 pounds except when blasting solid rock in its natural deposit.
- (b) The total weight of explosives loaded in a borehole less than 6 feet deep in bituminous and lignite mines shall be reduced by ½ pound for each foot of borehole less than 6 feet.

§ 75.1320 Multiple-shot blasting.

- (a) No more than 20 boreholes shall be fired in a round unless permitted in writing by the District Manager under §75.1321.
- (b) Instantaneous detonators shall not be used in the same circuit with delay detonators in any underground coal mine.
- (c) In bituminous and lignite mines, only detonators with delay periods of 1,000 milliseconds or less shall be used.
- (d) When blasting in anthracite mines, each borehole in a round shall be initiated in sequence from the opener hole or holes.
- (e) Arrangement of detonator delay periods for bituminous and lignite mines shall be as follows:
 - (1) When blasting cut coal-
- (i) The first shot or shots fired in a round shall be initiated in the row nearest the kerf or the row or rows nearest the shear: and
- (ii) After the first shot or shots, the interval between the designated delay periods of successive shots shall be at least 50 milliseconds but not more than 100 milliseconds.
- (2) When blasting coal off the solid—
- (i) Each shot in the round shall be initiated in sequence from the opener hole or holes; and
- (ii) After the first shot or shots, the interval between the designated delay periods of successive shots shall be at least 50 milliseconds but not more than 100 milliseconds.

§ 75.1321 Permits for firing more than 20 boreholes and for use of non-permissible blasting units.

(a) Applications for permits for firing more than 20 boreholes in a round and for the use of nonpermissible blasting